Claims 1, 7-19, 30 and 31 are pending in the application and presented for examination. Claims 2-6 and 20-29 are canceled without prejudice or disclaimer. Claims 8, 9 and 13 have been amended.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) A method for production of a derivatized resin represented by formula (I):

(I) R4-NH-(C=X)-Y-Z-SS wherein:

R4 is -NH-R3, -NH2, -OH, or -O-R3, wherein R3 is a protecting group, provided that when R4 is -NH-R3 or -O-R3, then the protecting group is removed and replaced by -H in the final product (I);

X is O, S, or NR7;

R7 is H, alkyl, alkenyl, aryl, aralkyl, cycloalkyl, or heterocycle;

Y is absent, -NH-, or -CH2;

Z is absent or is a substituent selected from the group consisting of -NH-, -O-, -(C=O)-, -S-, SO2-, alkyl, alkenyl, aryl, aralkyl, cycloalkyl, heterocycle, provided that when Y is absent and X is O or S, Z does not comprise -(C=O)- immediately adjacent to -(C=X)-, and when Y is -NH- and Z comprises an -NH- or an -S-, at least one carbon atom separates Y and the -NH- or-S- of Z, wherein functional groups of Z are protected;

SS is a solid support;

wherein said derivatized resin represented by formula (I) is prepared by a process comprising the steps of:

(i) reacting a starting material represented by formula (C)

(C) R1-(C=X)-Y-Z-SS, wherein R1 is a leaving group;

with a reactant of formula (D)

(D) R4-NH2

to form derivatized resin (I) of formula R4-NH-(C=X)-Y-Z SS; and

(ii) recovering the derivatized resin (I);

wherein said material represented by formula (C) is prepared by a process comprising the step of:

(iv) reacting a starting material of formula (A)

(A) R-Y-Z-SS, wherein R is a leaving group,

with a reactant of formula (B)

(B) R1-(C=X)-R2, wherein R2 is a leaving group, same or different than R1,

to form said starting material (C) represented by formula

(C) R1-(C=X)-Y-Z-SS.

2-6. (Canceled)

7. (Previously Presented) The method according to claim 1 wherein R-Y of reactant (A) in step (iv) is NH2, such that said method produces a derivatized resin represented by formula (IA):

(IA) R4-NH-(C=X)-NH-Z-SS.

8. (Currently Amended) The method according to claim 1 wherein Y ~~of reactant (B) in step (iv)~~ is absent or is -CH2-, and X is oxygen~~, and R1 is hydroxyl~~, such that said method produces a derivatized resin represented by formula (IB):

(IB) R4-NH-(C=O)-Y-Z-SS.

9. (Currently Amended) The method according to claim 8 which further comprises thionating the derivatized resin ~~(TB)~~ (IB) to produce a product represented by formula (IC);

(IC) R4-NH-(C=S)-Y-Z-SS.

10. (Original) The method according to claim 9 wherein said thionating comprises contacting the product (IB) with Lawesson's reagent or P2S5 in mild base.

11. (Original) The method according to claim 9 further comprising alkylating the derivatized resin (IC) with an alkylating agent capable of contributing an alkyl group R11 to form an intermediate represented by the formula (H):

(H) R4-N=(C-S-R11)-Y-Z-SS, and reacting the intermediate (H) with NH2-R7 to form a product represented by the formula (ID):

(ID) R4-NH-(C=NR7)-Y-Z-SS; and recovering the product (ID).

12. (Original) The method according to claim 11 wherein said alkylating agent is selected from the group consisting of iodomethane, iodoethane, methylbromide, ethylbromide, allylbromide, allylchloride, dimethylsulfate, and CH3OSO3CF3.

13. (Currently Amended) The method according to claim 1 to produce a product represented by the formula (ID):

(ID) = R4-NH-(C=NR7)-Y-Z-SS

wherein reactant (C) of step (i), when Y is not absent and R1 is -OH, is prepared by a process comprising:

reacting a starting material represented by formula (B):

(B) R1-(C=X)-R2, wherein R1 is -OH and R2 is an independently selected leaving group, same or different than R1, and X is NR7, with a reactant represented by formula (G):

(G) T-Z-SS; wherein T is -CH2Cl, -NH2, or COOH, under conditions permitting reaction of (B) with (C), such that T is transformed into moiety Y, and recovering the material (C) wherein X is NR7.

14. (Original) The method according to claim 13 wherein the reactant (B) is selected from the group consisting of diimidazole imine and phosgeneimine diimidazole.

15. (Previously Presented) The method according to claim 1 wherein, when R4 of the derivatized resin represented by formula (I) is R3-NH, R4 is converted to a derivatized resin bearing a free amine by removal of R3.

16. (Previously Presented) The method according to claim 15 wherein said derivatized resin is contacted with a protected aldehyde or ketoamide to form a semicarbazone derivatized resin.

17. (Original) The method according to claim 16 wherein said aldehyde is an argininal having a guanidino side chain and an amino terminal nitrogen.

18. (Original) The method according to claim 17 wherein said aldehyde is orthogonally protected.

19. (Previously presented) The method according to claim 18 wherein the argininal guanidino side chain of said aldehyde is di-Boc or di-Alloc protected and said amino terminal nitrogen is Fmoc protected.

20-29. (Canceled)

30. (Previously Presented) The method according to claim 1 wherein R1 of reagent (B) in step (iv) is selected from the group consisting of imidazole, p-nitrophenoxy, C1, succinimidyl, and Me-imidazolium; R2 of reagent (B) of step (iv) is selected from the group consisting of imidazole, C1, succinimidyl, and Me-imidazolium.

31. (Previously Presented) The method according to claim 1 wherein reactant (A) in step (iv) is selected from the group consisting of aminomethylated polystyrene resin and 4-methyl benzhydrylamine resin.